

AMENDMENT TO THE TITLE OF THE INVENTION:

Please replace the former title of the invention

PROTECTION SWITCH WITH REVERSE VOLTAGE PROTECTION

with the following new title

INTEGRATED CIRCUIT IMPLEMENTING PROTECTION SWITCH FOR BATTERY
CHARGING AND DISCHARGING WITH ENHANCED REVERSE VOLTAGE
PROTECTION.

AMENDMENTS TO THE SPECIFICATION:

Please replace the first paragraph of page 17 with the following amended paragraph:

The preferred embodiments disclose a novel optimized circuit for a protection switch with enhanced reverse voltage protection for effectively protecting a battery during charging and discharging operations and implementable as integrated circuit not needing any other essential external semiconductor components and normally used in portable electronic systems equipped with rechargeable batteries. The circuit uses MOSFET devices having switchable bulk connections to achieve control of both charging and discharging currents. These FET devices are cascaded to increase the operating range of the circuit. This provision is especially effective for the faulty case, when trying to charge under reversed voltage conditions, i.e. the charger connected with wrong polarity, where the very low breakdown voltages of the MOS-devices in reverse direction are the limiting specifications. To allow the fabrication of the whole protection circuit as one chip MOSFETs and control functions have to be integrated on one silicon die. It should be clear to those experienced in the art that the present invention can be applied and extended without deviating from the scope of the present invention.